Case Study: Enchanted Heights Sewer Project

Enchanted Heights Sewer Project is a $15 million project, which will bring a lasting remedy to a serious problem in a disadvantaged community. For years the residents of Enchanted Heights faced failing septic tanks which often overflowed into the streets. It was not unusual for children to pick their way through raw sewage on their way to school during rain events.

The City of Perris partnered with the County of Riverside and Eastern Municipal Water District to apply for a $10 million grant from the California Department of Public Health. In addition to this funding, a $5 million grant was secured from the State Water Resources Control board for the connection fees. With the money for the construction of the sewer secured, the city then launched an innovative and successful outreach program to ensure that the residents were aware of the project benefits. The outreach program proved to be highly successful and the residents became active participants. The sewer construction is well underway. The City's hard work in the outreach has paid off. The residents are extremely happy with the project and are looking forward to a new sewer system.

Source: City of Perris

Case Study: Affordability of Drinking Water and Wastewater Treatment - Kashia Band of Pomo Indians

Kashia Band of Pomo Indians of the Stewarts Point Rancheria is located on a ridge top area on the Sonoma County Coast. This community receives its drinking water from the Wheatfield Fork of the Gualala River, and water sources available within the Rancheria do not produce enough water to support the current community. Previously, the drinking water was treated through a surface water treatment plant that included a sand filtration system, disinfection system, and 32,000 gallon storage tank. However the water system was continually out of compliance since the filtration system could not remove sufficient amount of turbidity to meet drinking water treatment standards.

In 2007 a micro-filtration system and a 67,000 storage tank were installed to replace the inadequate filtration system and storage tank. This current system works very well and the tribe has been in compliance since the installation except for one violation in October 2010 due to insufficient chlorine contact time. The system is computerized and requires a level of knowledge that is not available with some of the tribal water operators. Any troubleshooting regarding the computer requires the assistance of an outside consultant. The Kashaya Utility District (KUD) works with the Rural Community Assistance Corporation (RCAC) on some system troubleshooting, but RCAC lacks support staff who fully understand how a micro-filtration system works. Indian Health Service and EPA both do not have staff adequately versed in this system, at least not to the tribe's knowledge. Since 2009, RCAC has only had one person who had some experience with micro-filtration systems. This water system serves 16 homes, approximately 118 people depending on the time of year. The Community has a high unemployment rate, ranging from 75% to 95% depending on the time of year. The households do pay for the service of water to the homes. On average, income to the PWS is about $9,000 a year, not enough to support a utility operator, even at half-time.

In January 2010, the system experienced a brown-out which compromised the computer system and stopped the micro-filtration system from running. The utility was unable to pump water for 96 hours. An outside consultant came in from Colorado to repair and reset the system at a cost of $5,100. This cost was about 57% of income the system earns in one year. A larger system could probably absorb this cost, but this is nearly impossible for a small system. KUD has been fortunate to not have any further breakdowns like that mentioned.

Understand, the tribe agreed to have this system based on the recommendation of the agencies involved and it certainly fixed the problem of compliance, but it appears the expected future costs were not adequately considered. The technical experience needed for the water operator was not considered and when the system is unable to pay an operator, the costs must come from some where else. KUD's current operator is paid only half-time because the tribe is unable to cover the cost of a full-time operator. The current operator works closer to 40 hours per week, but only reports 20 hours.

In 1999, Indian Health Service assisted the Rancheria with an imminent threat situation involving sewage leaking from individual septic tanks. The geology of the landscape where the Rancheria is located does not allow for good percolation; in many areas hard-pan (clay substrate) is three feet or less below the surface. The response was to empty and crush the individual septic tanks and connect the households to a Fast Waste Water Septic System. The system, ideally works well, but when it was installed it proved to be inefficient in energy usage and as a result, electricity bills were routinely over $600 per month. This cost, added to the cost of electricity to pump water from the river (which runs between $200-300 per month) resulted in the KUD shutting off the Fast System, causing an aerobic system to turn anaerobic. This coupled with hard-pan under the leach field less than three feet down leaves an effluent that is high in bacteria that ponds and emits an unpleasant smell.

Source: Nina Hapner, Kashia Band of Pomo Indians

Case Study: City of Beaumont 6th Street Sewer Project: Helping a Disadvanataged Community

Since 2002, the City of Beaumont has converted over 100 septic tanks to municipal sewer systems to improve water quality in the region. The 6th Street/Maple Avenue Sewer project will continue this trend by converting approximately 100 septic tanks to municipal sewer, all of them in a disadvantaged community.

For many years, the residents of this area in downtown Beaumont have suffered from failing septic tanks which spew raw sewage onto their streets. The downtown area of Beaumont has trailer parks which were originally built for overnight stays. But as time went on, families moved into the trailer parks in search of affordable housing and transformed the trailer parks into year round housing.

The trailers parks rely on communal septic tanks which are old and often times fail. The residents who live in the trailers are hard pressed to use their showers as too much water entering the system can cause septic failures. The residents have told the city's outreach consultant that they cannot have washers and dryers in their trailers because of the negative impact on the septic tanks. This force the residents to take their clothes to the laundry mats, many of which several miles from the trailer parks. Some of the residents don't have cars and must walk, often with young children, to the laundry mat to wash their clothes. The climate in Beaumont can be harsh; fridged winter temperatures and stifling heat in the summertime. There are other problems facing the residents because of the failing septic tanks. After a rainfall, it is not uncommon to see the children playing in water which may be tainted with sewage.

The City of Beaumont is seeking to apply for assistance from the from the State Water Resources Control Board State Revolving Fund program to abandon the septic tanks and connect the mobile homes to a municipal sewer system. The City of Beaumont is especially interested in seeking funding for disadvantaged communities. The State Water Resources Control Board staff reviewed the project area and deemed the area was not a disadvantaged community. In order to show that the residents of the proposed 6th Street Sewer project are a Disadvantaged Community, the city hired the Rural Communities Assistance Corporation (RCAC) to conduct an income survey. Sensitive to the fact that oftentimes residents are hesitant to respond to mail from someone they do not know, the city's outreach consultant spent time with the residents before the survey was mailed. The consultant spent time with the residents; talking to them on a daily basis so they would understand the need for the survey.

Initially the residents were very leery of filling out the income survey but the consultant explained the process to them in Spanish so they were aware of the need to respond to the survey. In spite of the initial outreach, it took the resident time to trust the process and fill out the form. Once the trust was established and the residents saw that the city had their interest at heart, they responded enthusiastically. It is not unusual to see them walking with the consultant through the community distributing flyers so that their neighbors would be informed of the need for the survey.

The most heartening part of the process has been the enthusiasm shown by the children. Once the outreach consultant gained the trust of the community, the children became interested in helping with the outreach. These same children explained the need for the project to their Spanish speaking parents.

When the residents of the Enchanted Heights Sewer project, which was partially funded by the State Water Resources Control Board, learned about the hesitation by the residents to fill out the income survey, they came to talk to the residents to encourage them to fill out the survey. The residents are hopeful that the State Revolving Fund program will help them solve a complex problem that poses a public health threat to them and their children.

Source: Kennedy Communications